--39. (New) The pharmaceutical composition of claim 38, wherein the chemically modified form of Factor IXa is an inactivated Factor IXa, an active-site blocked Factor IXa, or a Factor Ixai.--

--40. (New) The pharmaceutical composition of claim 38, wherein the recombinant mutein of Factor IXa compound may be a mutein form of Factor IXa, a recombinant Factor IXa with a deletion, or a Factor IXami.--

--41. (New) The pharmaceutical composition of claim 40, wherein the factor IXa compound is selected from the group consisting of a nucleic acid, an anti-Factor IXa antibody or a fragment thereof, a saccharide, a ribozyme, a small organic molecule, and a peptidomimetics.--

--42. (New) The pharmaceutical composition of claim 40, wherein the factor IXa compound is selected from the group consisting of a Glu-Gly-Arg chloromethyl ketone-inactivated human factor IXa, an inactive Christmas factor, a Glu-Aly-Arg chloromethyl ketone-inactivated factor IXa, a glutamyl-glycyl-arginyl-Factor IXa, a dansyl Glu-Gly-Arg chloromethyl ketone-inactivated bovine factor IXa (IXai), a Factor IXai, a competitive inhibitor of Factor IXa, a peptide mimetic of Factor IXa, a carboxylated Christmas factor, a competitive inhibitor of the formation of a Factor IXa/VIIIa/X complex, a des-γ-carboxyl Factor IX, a Factor IX lacking a calcium-dependent membrane binding function, an inactive Factor IX including only amino acids 1-47, an apoFactor IX including amino acids 1-47, a Factor IX Bm Kiryu, a Val-313-to-Asp substitution in the

catalytic domain of Factor IX, a Gly-311-to-Glu substitution in the catalytic domain of Factor IX, a Gly-311 to Arg-318 deletion mutant of Factor IX, an anti-Factor IXa antibody, an anti-Factor IXa monoclonal, and an anti-Factor IXa polyclonal antibody.--

--43. (New) The pharmaceutical composition of claim 40, wherein the factor IXa compound is modified by glycosylation, β-hydroxylation of aspartic acid, γ-carboxylation of glutamic acid, or propeptide cleavage.--

--44. (New) The pharmaceutical composition of claim 40, wherein the factor IXa compound is a genetically engineered, or a recombinant Factor Ixa wherein the serine amino acid at the active site is altered to render the recombinant Factor IXa functionally inactive and to maintain its capability of competing with intact, native Factor IXa for cell surface binding.--

--45. (New) The pharmaceutical composition of claim 40, wherein the factor IXa compound is an inactivated form of Factor IXa by the mutation of the gene which encodes Factor IXa.--

--46. (New) The pharmaceutical composition of claim 40, wherein the factor IXa compound is an active site-blocked Factor IXa or a Glu-Gly-Arg chloromethyl ketone-inactivated human Factor Ixa.--

--47. (New) The pharmaceutical composition of claim 40, wherein the factor IXa compound is an inactive mutein form of Factor Ixa which is useful as selective antithrombotic agent; wherein the inactive mutein form of Factor Ixa compound is made by the additions, deletions, or substitutions of one or more amino acid from natural factor Ixa to eliminate its ability to participate in the conversion of Factor X to Factor Xa.--

--48. (New) The pharmaceutical composition of claim 40, wherein the factor IXa compound is a proteolytically inactive, recombinant mutein form of Factor IX which has substantially the same amino acid sequence as normal or native human Factor IX; wherein a different amino acid has been substituted for one or more of His221, Asp269 and Ser365.--

--49. (New) The pharmaceutical composition of claim 40, wherein the factor IXa compound is in a proteolytically inactive, or a recombinant mutein form which has substantially the same amino acid sequence as normal or native human factor IXa; wherein one or more of His41, Asp89 or Ser185 in the heavy chain of Factor IXa has been substituted by a different amino acid.--

--50. (New) The pharmaceutical composition of claim 38, wherein the recombinant mutein of Factor IX compound is selected from the group consisting of Factor IXmi (Ser365→Xxx), Factor IXmi (Asp269→Yyy), Factor IXmi (His221→Zzz), Factor IXmi (Ser365→Xxx, Asp269→Yyy), Factor IXmi (Ser 365→Xxx, His221→Zzz), Factor IXmi

(Asp269→Yyy, His→Zzz), Factor IXmi (Ser365→Xxx, Asp269→Yyy, His→Zzz);

wherein the Factor IXa compound is selected from the group consisting of Factor IXami (Ser365→Xxx), Factor IXami (Asp269→Yyy), Factor IXami (His221→Zzz), Factor IXami (Ser365→Xxx, Asp269→Yyy), Factor IXami (Ser365→Xxx, His221→Zzz), Factor IXami (Asp269→Yyy, His→Zzz), and Factor IXami (Ser365→Xxx, Asp269→Yyy, His→Zzz);

wherein Xxx is any one of the standard amino acids other than serine, Yyy is any one of the standard amino acids other than aspartic acid, and Zzz is any of the standard amino acids other than histidine.--

--51. (New) The pharmaceutical composition of claim 50, wherein the recombinant mutein is Factor Ixmi(Ser365→Ala), or Factor IXami (Ser365→Ala).--

--52. (New) A method of inhibiting clot formation in extracorporeal human blood which comprises adding to the blood an amount of the pharmaceutical composition of claim 49 in an amount effective to inhibit clot formation in the subject without significantly interfering with hemostasis when the blood is administered to a patient.--

--53. (New) A method of inhibiting thrombosis in a human patient which comprises administering to the patient, or adding to blood which is to be administered to the patient, the pharmaceutical composition of claim 49 in an amount which is effective to inhibit thrombosis

without significantly interfering with hemostasis in the patient.--

--54. (New) A method for inhibiting thrombosis in a patient whose blood is subjected to extracorporeal blood circulation which comprises contacting the extracorporeal circulating blood with the pharmaceutical composition of claim 49 in an amount effective to inhibit thrombosis in the patient.--

--55. (New) The method of claims 52, wherein the effective amount of the factor IXa compound is from about 0.01 μg/ml plasma to about 250 μg/ml plasma.--

--56. (New) The method of claim 52, wherein the effective amount of the factor IXa compound is from about 0.05 μg/ml plasma to about 25 μg/ml plasma.--

--57. (New) The method of claim 52, wherein the effective amount of the factor IXa compound is from about 0.1 μg/ml plasma to about 5 μg/ml plasma.--

REMARKS

Claims 1-37 were pending in the subject application. By this Amendment, applicants have canceled claims 1-22 and introduced new claims 38-57. Accordingly, upon entry of this Amendment, claims 23-57 will be under examination.

Support for new claim 38 can be found, *inter alia*, on page 8, lines 25 - 33, page 11, lines 6 - 10, page 17, lines 20-22. Support for new claim 39 can be found, *inter alia*, on page 8, line 33 - page 9, line 1. Support for new claim 40 can be found,